W. W. Bailey, in Rhodora II, 218, speaks of its magnificent growth at Wickford and in South County.

In eastern Connecticut there are shrubs at North Stonington, not many miles from the Great Swamp region of southern Rhode Island. Further west, at Lyme, on the coast, it was collected in a deep swamp by C. A. Weatherby in 1917. Quite isolated from other New England stations is one at Union, Tolland County, almost up to the Massachusetts line, in a swamp visited by C. H. Bissell and other botanists in July, 1879.

In Litchfield County, northwestern Connecticut, it is known from Warren, also near the Massachusetts state line, and not very far from the station at Blandford, Mass. Winchester and Norfolk complete the roster for the state.

This Rhododendron apparently prefers acid soil conditions, and is completely absent from the extensive calcareous area of western Vermont. It may well have been more frequent and abundant in the past, as some of the stands have seemed to be waning, though others have spread in recent years. The beauty of the flowers has led to indiscriminate hacking of the shrubs. Experiments in transplanting have been unsuccessful.

HINGHAM, Massachusetts

THE NORTH AMERICAN VARIETY OF MILIUM EFFUSUM

M. L. FERNALD

MILIUM EFFUSUM L., var. **cisatlanticum,** var. nov., a var. typica recedit foliis glaucescentibus laminis plerumque laevibus plus minusve succulentibus 0.9–2 cm. latis apicibus vix attenuatis; panicula laxiora verticillis remotis ramis elongatis plerumque binis; spiculis 3–5 mm. longis; fructibus 2.5–3 mm. longis.—Eastern North America, from southeastern Labrador Peninsula and northwestern Newfoundland to Algoma District, Ontario, and Minnesota, south to Nova Scotia, northern and western New England, Pennsylvania, northern Maryland, West Virginia, south-central Ohio, northern Indiana and north-central Illinois. TYPE from NEWFOUNDLAND: thickets on quartzite ledges and gravel along brook, Deep Gulch, Doctor Hill, Highlands of St. John, July 30, 1929, *Fernald, Long and Fogg*, no. 1332 (TYPE in Herb. Gray.; ISOTYPE in Herb. Phil. Acad.).

Typical *Milium effusum* L., the plant of Eurasia, there has a range covering much of the vast continental area, from northernmost Scandinavia (lat. 70°) eastward to northern Kamtchatka, thence south to southern Europe, Asia Minor, the Himalaya, etc. On the other hand, the American plant which passes as identical with the Eurasian one has a very limited range, in the richest areas of eastern North America: from lat. 51° 25′ at the western entrance to the Straits of Belle Isle westward to the north shore of Lake Superior (lat. 47°) and Minnesota, thence south to Nova Scotia, northern and western New England, Pennsylvania, upland Maryland (lat. 39° 30′), West Virginia (to lat. 38° 20′), south-central Ohio (ca. 40°), northern Indiana (41° 30′) and north-central Illinois (ca. 40° 20′); *i. e.* from latitude 51° 25′ to 38° 20′, and unknown in western North America. Such a restricted range in America at once suggests doubt as to whether our plant, completely isolated, is identical with the nearly continental Eurasian species which there stretches across 160° of longitude and from lat. 70° nearly to lat. 35°.

When, therefore, one looks over a large series of specimens and the best Old World descriptions, he is at once struck by the difference in the inflorescences on the two vast continents. This habital difference in the panicle is well brought out in two readily accessible works: the Eurasian plant shown in Hegi, Ill. Fl. Mittel-Eur. i. t. 25, fig. 3; the American in Hitchcock, Man. Grasses U. S. fig. 860. Hegi's panicle is accurately described: "panicle-branches mostly up to 5 (4–7) . . . up to 1 dm. long (Rispenäste meist zu 5 (4 bis 7) . . . bis 1 dm. lang)"; Hitchcock correctly describes the panicle of our plant with "the slender branches in remote spreading or drooping pairs or fascicles". Here and in other characters their descriptions diverge and it is clear that each was describing the plant of his own area; and a study of 45 Eurasian specimens and 137 North American ones shows several nearly or quite definite distinctions in the series.

Perhaps the most striking character in the herbarium is in the branching of the panicle. Of the Eurasian Hegi (as already noted) says (and Ascherson & Graebner and others similarly say): "Rispenäste meist zu 5 (4 bis 7)", while of ours Hitchcock says: "the slender branches in remote . . . pairs or fascicles". As

early as 1843 John Torrey, in his Flora of the State of New York, 422, said "the lower branches clustered; upper ones opposite". Nevertheless, he concluded: "Our plant seems to be identical with the *M. effusum* of Europe", a conclusion which has been unchallenged for more than a century.

Returning to the contrasts, we may next note that the common Eurasian plant is described as "70 bis 100 cm hohes" (0.7–1 m.). In unfavorable conditions ours may be even lower, but Torrey said 3–6 feet (0.9–1.8 m.) and Marie-Victorin says, correctly, 0.6–2 m. high. In Europe the "Leaves are grass-green, with blades mostly (especially the basal) . . . up to 2 dm. long and 1.5 cm. broad, very rough on the margin and short-acuminate (Blätter grasgrün, mit meist (weingstens die grundständigen) . . . bis 2 dm langen und 1,5 cm breiten, am Rande sehr rauhen, kurz zugespitzten". When fresh (not well shown after drying) the leaves of our plant are glaucous, somewhat succulent or fleshy and usually quite smooth on the upper face, though scabrous on the margin. The longer ones (especially of the basal tufts, although sometimes as short as in the European, often reach a length of 3 or 4 dm. (Torrey said 8–12 inches or 1.5–3 dm.) and in the richest habitats a breadth of 1.2–2 cm. In the Old World material the margin and usually the upper surface of the leaf-blade is scabrous; with us it may be so but the upper surface is oftenest quite smooth to touch. Furthermore, a gradually acuminate tip of the blade is exceptional with us. Usually in America the lower and median leaves have almost blunt tips or these gradually rounded to the apex. In the Eurasian plant the spikelets are "about 3 mm. long" (Hegi) or "almost 3 mm. long" (Aschers. & Graebn.); in ours they range from 3–5 mm. in length. In the European plant the fruits are about 2 mm. long ("ca. 2 mm lang"—Hegi; "etwa 2 mm lang"—Aschers. & Graebn.) and oval. In our plant they are 2.5–3 mm. long and narrowly ovoid to broadly lanceolate.

With such a number of differences it is clear that the North American plant is really identical with the Eurasian; but enough of the characters break down in individual cases on both sides of the Atlantic to indicate that they are not specifically separable. In general their very similar habit, leaves, panicles and spikelets separate them both from the other recognized species of *Milium*.

The inflorescence of our plant is nearly repeated in *M. effusum*, forma *Lerchenfeldianum* (Schur) Aschers. & Graebn. with the general characters of the Old World plant but with "Rispenäste unvergweigt," in Europe; and very exceptional colonies in America superficially simulate Old World specimens. The strong departures in several characters, however, are so combined in our plants as to make their separation as a well-defined geographic variety desirable.

Representative specimens in the Gray Herbarium and in the Herbarium of the New England Botanical Club are as follows, these selected from 137 collections studied:

NEWFOUNDLAND: Highlands of St. John, *Fernald, Wiegand, Long, Gilbert and Hotchkiss,* no. 27,511; Ingornachoix Bay, *Fernald, Wiegand & Kittredge,* no. 2488.

QUEBEC: Blanc Sablon (Straits of Belle Isle), *Fernald & Wiegand,* no. 2489; Rivière des Caps, Anticosti, *Victorin & Rolland,* no. 27,813; Table-topped Mt., Gaspé Co., *Fernald & Collins,* no. 383; Mt. Albert, Gaspé Co., *Fernald & Collins,* no. 402; Cap au Renard, Gaspé Co., *Pease,* no. 19,228; Grand Cascapedia River, Bonaventure Co., *Williams, Collins & Fernald,* July 12, 1905; Cap Chat River, Matane Co., *Fernald & Pease,* no. 24,844; Bic, Rimouski Co., July 16, 1904, *Collins & Fernald;* Rivière du Loup, Temiscouata Co., *Fernald & Weatherby* in Pl. Exsicc. Gray. no. 515; Lake Ouimet, Terrebonne Co., June 18, 1922, *Pease,* no. 19,023; Bolton, Brome Co., July 25, 1926, *Knowlton.*

NEW BRUNSWICK: Clair, July 11, 1904, *A. A. Eaton;* Woodstock, *Pease,* no. 25,241.

NOVA SCOTIA: St. Paul Island, *Perry & Roscoe,* no. 46; Pleasant Bay, Inverness Co., *Pease,* no. 26,632; Five-mile River, Hants Co., *Pease & Long,* no. 19,859.

MAINE: Monticello, *Fernald & Long,* no. 12,587; Township iv, Range 18, Somerset Co., July 7, 1917, *St. John & Nichols;* Jackman, *Fernald & Pease,* no. 24,842; Day Mt., Strong, August 31, 1904, *Chamberlain & Knowlton.*

NEW HAMPSHIRE: Stewartstown, *Fernald & Pease,* no. 16,680; Colebrook, *Pease,* no. 10,384; Carroll. *Pease,* no. 30,155; Milan, *Pease,* no. 17,117; Mt. Willard, Crawford, July 1, 1898, *Williams;* Croydon, *F. C. Seymour,* no. 4732.

VERMONT: Guildhall, *Pease,* no. 23,728; Willoughby, June 24, 1892, *Kennedy;* Eden, June 9, 1918, *Knowlton;* West Monkton, June 16, 1881, *Faxon;* Cavendish, *Fernald,* no. 446.

MASSACHUSETTS: Middlefield, *Fernald & Long,* no. 8690; Mt. Greylock, North Adams, July 25, 1916, *Hoffmann;* West Stockbridge, May 30, 1920, *Hoffmann.*

CONNECTICUT: Hartland, *Weatherby*, no. 3494.

NEW YORK: Bonaparte Swamp, Lewis Co., *House*, no. 6278; Canton, *O. P. Phelps*, no. 168; Utica, *Gray*, N. Am. Gram. Cyp., no. 113; Arkville, *Agnes Chase*, Am. Grasses, no. 631; Wayland, *Wiegand*, no. 15,209; Savannah, *F. P. Metcalf*, no. 5598; Cortland, *Eames & MacDaniels*, no. 3499.

PENNSYLVANIA: Elkdale, *Fogg*, no. 12,196; Elmhurst, *Glowenke*, no. 5896; Moscow, *Glowenke*, no. 7843; Pavia, *Berkheimer*, no. 2517; Brockway, *Wahl*, no. 2287 (leaves 2 cm. broad); Morris, *Fogg*, no. 16,096.

WEST VIRGINIA: Canaan Valley, Tucker Co., *Allard*, no. 6880.

ONTARIO: Niagara, June 6, 1891, *J. Macoun;* Galt, *Montgomery*, no. 1085; Stokes Bay, *Krotkov*, no. 8703; Sault Ste. Marie, *F. J. Hermann*, no. 7261; Batchawana, Algoma Distr., *Taylor et al.*, no. 1084.

MICHIGAN: Port Huron, *C. K. Dodge*, no. 39; Tecumseh, *Folwell*, no. 99; Ann Arbor, June 8, 1898, *Burnham;* Lansing, June 7, 1886, *L. H. Bailey;* Gogebic Lake, *Pease & Bean*, no. 26,468; West Bluff, Keweenaw Co., *Fernald & Pease*, no. 3086.

OHIO: Braceville Twp., Trumbull Co., June 9, 1907, *Webb & Rood:* Nelson Ledge, Portage Co., *Webb*, no. 923.

WISCONSIN: Granite Heights, *Cheney*, no. 3107; Mole Lake, Forest Co., *E. J. Palmer*, no. 27,747; Racine, June 21, 1881, *J. J. Davis*.

ILLINOIS: Elgin, 1863, *Vasey*.

GALIUM HARCYNICUM: A PROBLEM IN INTERPRETING THE INTERNATIONAL RULES

M. L. FERNALD

RECENT European taxonomists agree that this species of western, central and northern Europe (northwest to Iceland) and southeastern Newfoundland, which has often passed as *Galium saxatile* L. Sp. Pl. i. 106 (1753), is not that species "*Habitat* in Hispaniae *maritimis lapidosis*". Unfortunately, in first recording this "HEATH-BEDSTRAW" as a native of the rocky barrens of southeastern Newfoundland, in RHODORA, xxviii. 83 and 236 (1926), I accepted for the plant the name of Linnaeus (1753), not realizing, as recent Europeans assert, that *G. saxatile* sensu many authors, not L. (1753), should be called *G. harcynicum* Weigel, Obs. 25 (1772) or as most of them, including many who claim to follow the International Rules, insist on writing it *G. hercynicum*, the spelling which Weigel did not use.